

# PATENT SPECIFICATION

DRAWINGS ATTACHED

848,784



Date of Application and filing Complete Specification March 25, 1959.  
No. 10444/59.

Application made in France on May 7, 1958.

Complete Specification Published Sept. 21, 1960.

Index at Acceptance:—Class 125(3), T(2B1:4C3:9E:20B).

International Classification:—B67b.

## COMPLETE SPECIFICATION

### Improvements in or relating to Crown Corks

I, MAURICE NESME, a citizen of French Republic, residing 12, Place Jeanne d'Arc, Neufchateau, Vosges, France, do hereby declare this invention, for which I pray that  
5 a patent may be granted to me, and the method by which it is to be performed to be particularly described in the following statement:—

The present invention relates to an improved crown-cork.

It is well-known that in the sealing of bottles ever-increasing use is being made of crown-corks which include, in place of the usual sealing disk made of cork and covered  
15 with a "spot" or without a spot, a sealing gasket made of a synthetic plastics material or like material provided at its centre with a projecting portion adapted to form a plug extending into the neck of the bottle to be sealed. In order to make it possible easily  
20 to recover the synthetic plastic sealing gasket after the bottle has been uncorked in order to use it as a re-corking plug, various methods of mounting the sealing gasket within the metallic cap have heretofore  
25 been considered. Broadly, all the known mounting means aim at providing a sufficiently firm connection between the sealing gasket and the metal cap to ensure that prior  
30 to sealing a bottle it will not separate from said cap, while at the same time the connection between the sealing gasket and the metal cap is such, that on removal of the crown-cork with a crown-cork opener, only  
35 the metal cap will be removed from the bottle neck while the synthetic plastic gasket remains in position upon said bottle neck owing to the penetration of its projecting part into said neck.

The results obtained with crown-corks including, as described above, a metal cap and a synthetic plastic sealing gasket removably secured to the cap, are not fully satisfactory in that on uncorking a bottle the metal cap  
45 carries the gasket away with it, so that

in order to recover the gasket for use as a re-corking plug, it is necessary to detach the seal from the metal cap by one means or another.

Another drawback of crown-corks as specified above resides in the fact that a considerable portion of the synthetic plastic gasket remains uncovered, so that when  
50 such a crown-cork is being used for sealing a bottle holding a liquid containing carbonic acid gas, the latter can easily escape, since the synthetic plastic material used in the manufacture of the gasket, as is well-known, is not impervious to gases and especially  
55 carbonic acid gas.

The invention has as its object the provision of an improved crown-cork, which includes in a known manner a metal cap and a sealing gasket of a synthetic plastic material, but with both these elements  
60 however being so attached to one another that the gasket, while remaining unitarily bonded to the metal cap throughout the operations preceding the sealing of a bottle will separate completely from the metal cap  
65 on removal of the crown-cork and will remain in sealing position upon the bottle neck while the said metal cap is detached therefrom.

Another advantage of the invention lies in the fact that the crown-cork is so arranged  
75 as to prevent any escape of gas and especially carbonic acid gas.

The crown-cork according to the invention is characterized by the fact that its synthetic plastic sealing gasket, having a  
80 projecting portion in the form of a plug and a peripheral flange between the end wall of the metal cap and the top surface of the neck of a bottle, has two circumferential grooves  
85 one of which is adapted to anchor the gasket removably in a hole formed in the end wall of the metal cap and the other adapted to retain a metal disk which seals the plug-like portion of the sealing gasket  
90

[Price 3s. 6d.]

Price 4s 6d.

approximately on a level with the peripheral flange of the gasket.

According to another feature of the invention the outer diameter of the peripheral flange of the sealing gasket is slightly less than the smallest diameter defined by the corrugated skirt of the metal cap after a crown-cork has been crimped over the neck of a bottle.

Further features and advantages of the invention will stand out from the ensuing description with reference to the accompanying drawing, which illustrates on an enlarged scale, diagrammatically and by way of example only, one form of embodiment of an improved crown-cork.

In the drawing:

Fig. 1 is a sectional elevational view of the sealing gasket for an improved crown-cork according to the invention.

Fig. 2 is a view similar to Fig. 1 with the gasket shown provided with its associated metal sealing disk or washer.

Fig. 3 is an elevational sectional view of a crown-cork positioned on the neck of a bottle but not yet crimped thereover.

Fig. 4 is a view similar to Fig. 3 but in which the crown-cork is shown as having been crimped.

In the exemplary embodiment shown (see Figs. 1 and 2), the sealing gasket includes a recessed body 1 in the form of a plug provided around its periphery with a flange 2 adapted to form the seal proper, both said flange and bottom end wall 3 of the body 1 preferably being provided in known fashion with wavy portions such as 4 and 5 respectively.

The aforesaid body 1 projects slightly beyond the peripheral flange 2 defining a collar 6 externally formed with a peripheral circumferential groove 7.

Moreover, the body 1 is provided in its inner surface and substantially on a level with the peripheral flange 2, with an inner circular groove 8.

To secure the sealing gasket just described to the metal cap 9 of a crown-cork, a hole is first made in the end wall of said cap of sufficient diameter to enable the sealing gasket generally designated 10 in Figs. 3 and 4 to be snapped into engagement with the metal cap 9 after the manner of a snap-fastener, by inserting the peripheral edge of the hole formed in the end wall of said cap 9 into the groove 7.

Preferably, the perforation in the end wall of the metal cap 9 is so effected that it will result in a disk 11 of a diameter such that it can be rigidly bonded with a sealing gasket 10 by insertion into the annular groove 8, as is clearly apparent from Figs. 2 to 4.

As concerns the diameter of the peripheral flange 2 of the sealing gasket, this is determined so as to be less than the smallest

diameter which is liable to be defined by the free end of the corrugated skirt of the metal cap 9 after the crown-cork has been crimped over the neck 12 of a bottle. In other words the diameter of the peripheral flange 2 is so determined as to be less than the diameter designated D in Fig. 4.

Tests performed with the improved crown-cork as just described have demonstrated that on opening a bottle only the metal cap 9 separates from the bottle neck 12, while the sealing gasket 10 remains inserted in plugging position in said bottle neck 12. This is a very important advantage and results in part from the diameter adopted for the peripheral flange 2, and in part from the rigidity imparted to the gasket 2 by the disk 11.

Another advantage of the invention resides in the fact that the metal disk 11 which seals the recessed body 1 of the sealing gasket, effectively resists any leakage of gas through this gasket, said disk further having the additional effect of serving as a kind of spacer and preventing distortion of the sealing gasket 10 on opening of the bottle, said gasket being thus prevented from following the skirts of the crown-cork and thus contributes to the non-displacement of the synthetic plastic gasket during the unsealing operation.

It should be observed, in addition, that there is nothing to prevent the inscription of printed matter on the apparent face of the metal disk 11, so that even after a bottle has been opened the seal used as a re-corking plug makes it possible to identify the contents of a previously unsealed and possibly partly-empty bottle.

It is obvious that the invention has only been described and illustrated in a purely explanatory and in no way in a restrictive sense and that various modifications may be made in the details of the form of embodiment disclosed without thereby exceeding the scope of the invention, as defined by the appended claims

#### WHAT I CLAIM IS:—

1. Improved crown-cork of the kind comprising a metal cap and a sealing gasket of synthetic plastics material forming a re-corking plug removably fastened to said metal cap, wherein the said gasket having a projecting portion in the form of a plug and a peripheral flange between the end wall of the metal cap and the top surface of the neck of a bottle, has two circumferential grooves one of which is adapted to anchor the gasket removably in a hole formed in the end wall of the metal cap and the other adapted to retain a metal disk which seals the plug-like portion of the sealing gasket approximately on a level with the peripheral flange of the gasket.

2. Crown-cork according to claim 1 wherein the outer diameter of the peripheral

flange of the sealing gasket is slightly less than the smallest diameter defined by the corrugated skirt of the metal cap after a crown-cork has been crimped over the neck  
5 of a bottle.

3. A crown-cork substantially as described

in the specification with reference to the accompanying drawing.

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Bournemouth: Printed for Her Majesty's Stationery Office, by Richmond Hill Printing Works Ltd.—1960.  
Published at The Patent Office, 25, Southampton Buildings, London, W.C.2, from which copies may be obtained.

FIG. 1

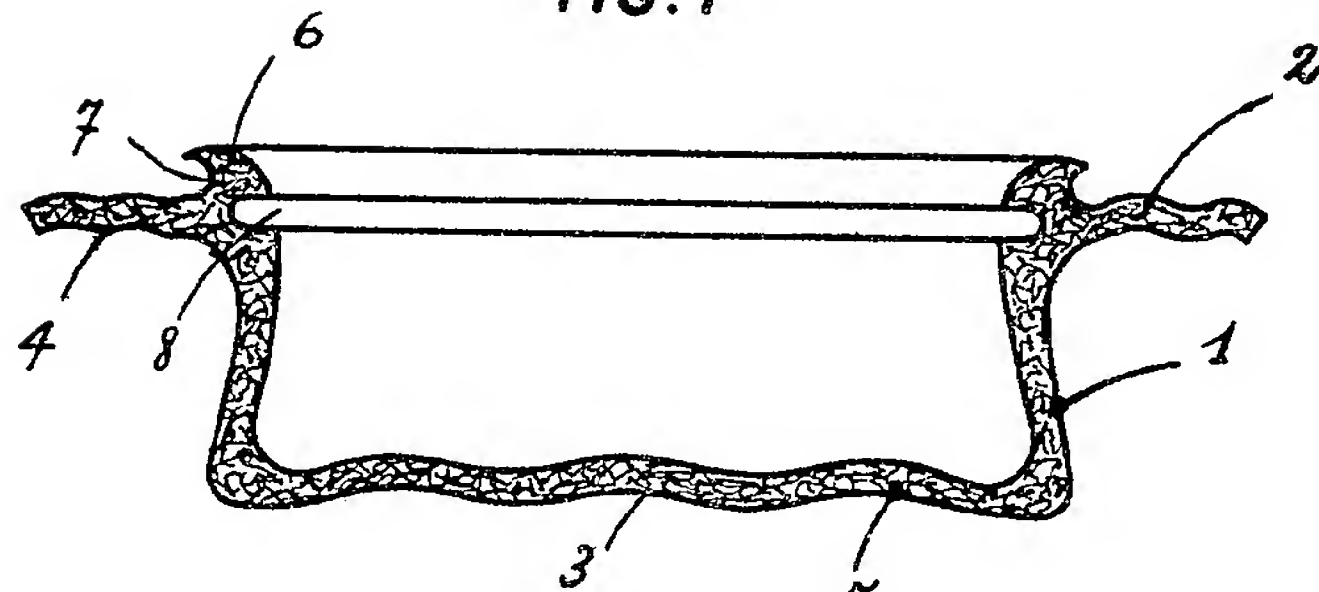


FIG. 2

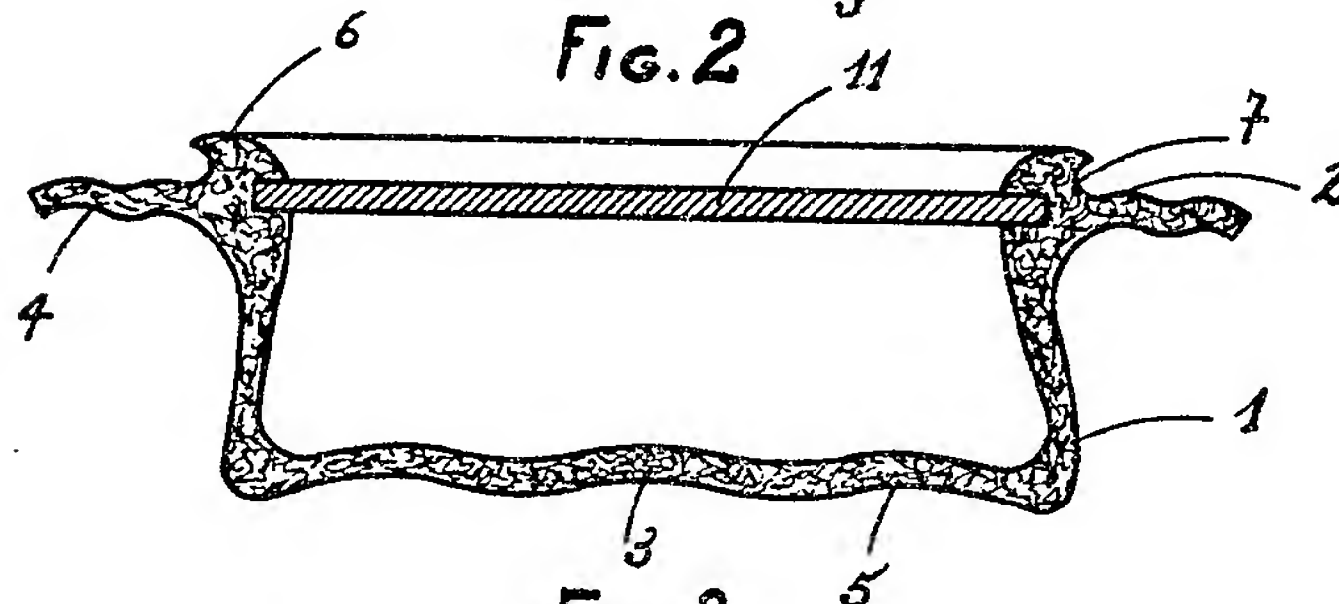


FIG. 3

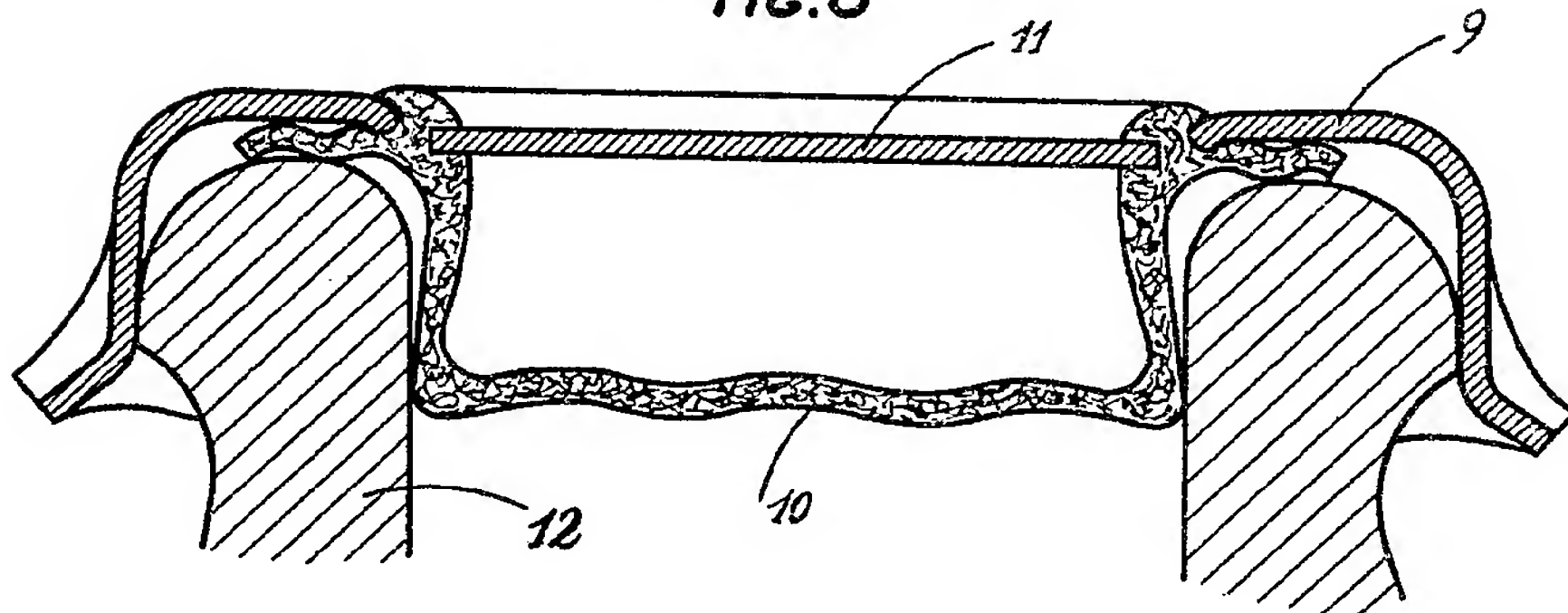


FIG. 4

